

WHAT IS CLAIMS IS:

1. A catalyst for exhaust gas purification, comprising:

a NO_x absorbent material which absorbs NO_x in an exhaust gas in an environment of excess oxygen whose exhaust gas oxygen concentration level is high, whereas, when the exhaust gas oxygen concentration level becomes lower in a given temperature range, said NO_x absorbent material releases said absorbed NO_x;

a precious metal; and

an oxygen storage material which releases a larger amount of oxygen in said given temperature range in comparison with other temperature ranges.

2. The exhaust gas purification catalyst of claim 1,

wherein the temperature, at which the oxygen release amount of said oxygen storage material increases to a maximum, lies in said given temperature range.

3. The exhaust gas purification catalyst of claim 1,

wherein said oxygen storage material is a Ce-Pr mixed oxide.

4. The exhaust gas purification catalyst of claim 2,

wherein said oxygen storage material is a Ce-Pr mixed oxide.

5. The exhaust gas purification catalyst of any one of claims 1-4,

wherein said oxygen storage material is supported on a substrate, being present in amounts ranging from 15g to 300g per 1L of said substrate.

6. The exhaust gas purification catalyst of any one of
5 claims 1-4,

wherein at least a part of said NO_x absorbent material is supported on said oxygen storage material.

7. A catalyst for exhaust gas purification, comprising:

10 a NO_x absorbent material placed in an exhaust gas alternating between a first period during which the exhaust gas oxygen concentration level becomes relatively high and a second period during which the exhaust gas oxygen concentration level becomes relatively low, and formed of at least one of Ba, K, Sr, and Mg;

15 a precious metal; and
a Ce-Pr mixed oxide.

8. A catalyst for exhaust gas purification disposed in an exhaust passage of an engine, comprising:

20 a NO_x absorbent material which absorbs, when the oxygen concentration level of an exhaust gas from said engine is high, NO_x in said exhaust gas, whereas, when said oxygen concentration level becomes lower, said NO_x absorbent material releases said absorbed NO_x;

a precious metal; and

an oxygen storage material which enhances the ionization potential of said NO_x absorbent material.

9. The exhaust gas purification catalyst of claim 8, wherein at least a part of said NO_x absorbent material is

5 supported on said oxygen storage material.

10. An exhaust gas purification system, comprising:

a catalyst for exhaust gas purification including a NO_x absorbent material which absorbs, when the oxygen concentration level of an exhaust gas is high, NO_x in said exhaust gas, whereas, when said oxygen concentration level becomes lower, said NO_x absorbent material releases said absorbed NO_x, a precious metal, and an oxygen storage material which enhances the ionization potential of said NO_x absorbent material; and

15 oxygen concentration level control means for changing the oxygen concentration level of said exhaust gas so that a first period during which said NO_x absorbent material absorbs said NO_x as the oxygen concentration level of said exhaust gas becomes higher alternates with a second period during
20 which said NO_x absorbent material releases said absorbed NO_x as said oxygen concentration level becomes lower, and that said second period is shorter than said first period.